NMEA2000® Exhaust Gas Temperature Sensor



- **Display actual exhaust gas temperature in °C**
- **Accurate Type T Thermocouple probe element from -20°C to 300°C**
- **Stainless Steel sheathed 3 metre screened thermocouple cable**
- **Corrosion resistant Duplex Stainless Steel probe housing**
- **Detect partial cooling water blockages before damage occurs**
- **Display on Master Consoles or on separate Alarm Panels**
- **Blue LED confirming NMEA2000® transmission**
- **Manufactured to NMEA2000® standard**

The Oceanic Systems' NMEA2000® 4510 Exhaust Gas Temperature Sensor and 4511 Exhaust Gas Temperature Probe are designed to measure the exhaust gas temperature of a marine engine or generator. It uses a highly accurate Type T thermocouple and report the temperature directly onto the NMEA2000® network.

The probe is designed to be easily mounted in the exhaust hose with an armoured stainless steel sheathed cable to the NMEA2000® sensor module mounted within 3 metres. The probe mount is a corrosion resistant duplex stainless steel pocket that is sealed to prevent any exhaust leaks.

The standard NMEA2000® output messages can be displayed on any suitably equipped NMEA2000® displays to show the actual temperature so that partial cooling water blockages can be seen before any damage occurs.

The 4510 Exhaust Gas Temperature Sensor is an important part of the Oceanic Systems' complete vessel monitoring and control system.

NMEA2000® Exhaust Gas Temperature Sensor Part Nos. 4510, 4511

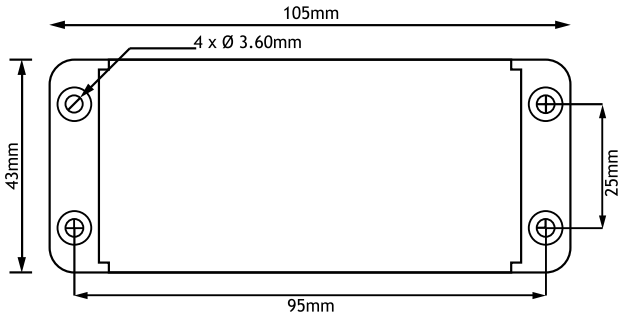
4510 NMEA2000® Exhaust Gas Temperature Sensor Control Box



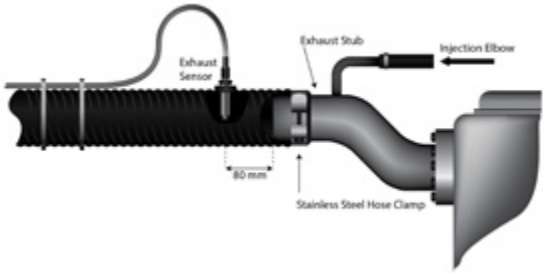
4511 Exhaust Gas Temperature Probe



Mounting Information for the Exhaust Gas Temperature Sensor



Mounting the Exhaust Gas Temperature Probe



4510 Exhaust Gas Temperature Sensor

NMEA2000® Parameter Group Numbers (PGNs)		
Type	**PGN No**	**PGN Name**
Periodic Data PGNs	PGN130316	Temperature Extended Range
Protocol	PGN126464	Tx/Rx PGN List
	PGN126996	Product Information
	PGN059392	ISO Acknowledge
	PGN059904	ISO Request
	PGN060928	ISO Address Claim
	PGN126208	Command/Request Group
	PGN130312	Temperature

Design Standard	
Parameter	**Comment**
NMEA2000®	Network standard
Maritime Nav and RadioComm Equipment	IEC60945
CE and FCC	Electromagnetic Compatibility

Electrical and Mechanical		
Parameter	**Value**	**Comment**
Operating Voltage	9 to 32 Volts	DC Voltage
Power Consumption	45mA	Average Operating
Load Equivalence Number	1	LEN
Reverse Battery Protection	Yes	Indefinitely
Load Dump Protection	Yes	SAE J1113
Size	105 x 43 mm	
Weight	100gr	

Environmental	
Parameter	**Value**
IEC 60954 Classification	Protected
Degree of Protection	IP30
Operating Temperature	-25°C to 50°C
Storage Temperature	-40°C to 70°C
Relative Humidity	93%RH @40° per IEC60945-8.2
Vibration	2-13.2Hz @ ±1mm, 13.2-100Hz @ 7m/s2 per IEC 60945-8.7
Electromagnetic Emission	Conducted and Radiated Emission per IEC 60945-9
Electromagnetic Immunity	Conducted, Radiated, Supply, and ESD per IEC 60945-10
Safety Precautions	Dangerous Voltage, Electromagnetic Radio Frequency per IEC 60945-12

4511 Exhaust Gas Temperature Probe

Electrical and Mechanical	
Type 'T' Thermocouple	
Cable Length	3Mtr

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